OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/042,991

DATE: 01/30/2002
TIME: 15:33:26

Input Set : A:\Wl23650.txt
Output Set: N:\CRF3\01302002\J042991.raw

ENTERED

```
 3 <110> APPLICANT: Ian M. Whitehead
 4         Alan Slusarenko
 5         Duncan Gaskin
 6         Alan Brash
 7         Nathalie Tijet
 9 <120> TITLE OF INVENTION: GUAVA (PSIDIUM GUAJAVA) 13-HYDROPEROXIDE
10         LYASE AND USES THEREOF
13 <130> FILE REFERENCE: 06027.0001U3
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C--> 15 `<140> CURRENT APPLICATION NUMBER: US/10/042,991`
C--> 16 `<141> CURRENT FILING DATE: 2002-01-09`
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18 <160> NUMBER OF SEQ ID NOS: 27
20 <170> SOFTWARE: FastSEQ for Windows Version 3.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 7
24 <212> TYPE: PRT
25 <213> ORGANISM: Psidium Guajava (guava)
27 <400> SEQUENCE: 1
28  Thr Tyr Pro Pro Ser Leu Ser
29    1               5
31 <210> SEQ ID NO: 2
32 <211> LENGTH: 476
33 <212> TYPE: PRT
34 <213> ORGANISM: Psidium Guajava (guava)
36 <400> SEQUENCE: 2
39  Met Ser Ser Thr Tyr Pro Pro Ser Leu Ser Pro Pro Ser Ser Pro Arg
40    1               5              10              15
41  Pro Thr Thr Leu Pro Val Arg Thr Ile Pro Gly Ser Tyr Gly Trp Pro
42                20              25              30
43  Leu Leu Gly Pro Ile Ser Asp Arg Leu Asp Tyr Phe Trp Phe Gln Gly
44                35              40              45
45  Pro Glu Thr Phe Phe Arg Lys Arg Ile Glu Lys Tyr Lys Ser Thr Val
46            50              55              60
47  Phe Arg Ala Asn Val Pro Pro Cys Phe Pro Phe Phe Ser Asn Val Asn
48   65              70              75              80
49  Pro Asn Val Val Val Val Leu Asp Cys Glu Ser Phe Ala His Leu Phe
50                85              90              95
51  Asp Met Glu Ile Val Glu Lys Ser Asn Val Leu Val Gly Asp Phe Met
52                100             105             110
53  Pro Ser Val Lys Tyr Thr Gly Asn Ile Arg Val Cys Ala Tyr Leu Asp
54            115             120             125
55  Thr Ser Glu Pro Gln His Ala Gln Val Lys Asn Phe Ala Met Asp Ile
56        130             135             140
57  Leu Lys Arg Ser Ser Lys Val Trp Glu Ser Glu Val Ile Ser Asn Leu
```

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```
58  145                     150                     155                     160
59  Asp Thr Met Trp Asp Thr Ile Glu Ser Ser Leu Ala Lys Asp Gly Asn
60               165                     170                     175
61  Ala Ser Val Ile Phe Pro Leu Gln Lys Phe Leu Phe Asn Phe Leu Ser
62               180                     185                     190
63  Lys Ser Ile Ile Gly Ala Asp Pro Ala Ala Ser Pro Gln Val Ala Lys
64               195                     200                     205
65  Ser Gly Tyr Ala Met Leu Asp Arg Trp Leu Ala Leu Gln Leu Leu Pro
66          210                     215                     220
67  Thr Ile Asn Ile Gly Val Leu Gln Pro Leu Val Glu Ile Phe Leu His
68  225                     230                     235                     240
69  Ser Trp Ala Tyr Pro Phe Ala Leu Val Ser Gly Asp Tyr Asn Lys Leu
70               245                     250                     255
71  Tyr Gln Phe Ile Glu Lys Glu Gly Arg Glu Ala Val Glu Arg Ala Lys
72               260                     265                     270
73  Ala Glu Phe Gly Leu Thr His Gln Glu Ala Ile His Asn Leu Leu Phe
74          275                     280                     285
75  Ile Leu Gly Phe Asn Ala Phe Gly Gly Phe Ser Ile Phe Leu Pro Thr
76          290                     295                     300
78  Leu Leu Ser Asn Ile Leu Ser Asp Thr Thr Gly Leu Gln Asp Arg Leu
79  305                     310                     315                     320
80  Arg Lys Glu Val Arg Ala Lys Gly Gly Pro Ala Leu Ser Phe Ala Ser
81               325                     330                     335
82  Val Lys Glu Met Glu Leu Val Lys Ser Val Val Tyr Glu Thr Leu Arg
83               340                     345                     350
84  Leu Asn Pro Pro Val Pro Phe Gln Tyr Ala Arg Ala Arg Lys Asp Phe
85          355                     360                     365
86  Gln Leu Lys Ser His Asp Ser Val Phe Asp Val Lys Lys Gly Glu Leu
87          370                     375                     380
88  Leu Cys Gly Tyr Gln Lys Val Val Met Thr Asp Pro Lys Val Phe Asp
89  385                     390                     395                     400
90  Glu Pro Glu Ser Phe Asn Ser Asp Arg Phe Val Gln Asn Ser Glu Leu
91               405                     410                     415
92  Leu Asp Tyr Leu Tyr Trp Ser Asn Gly Pro Gln Thr Gly Thr Pro Thr
93               420                     425                     430
94  Glu Ser Asn Lys Gln Cys Ala Ala Lys Asp Tyr Val Thr Leu Thr Ala
95          435                     440                     445
96  Cys Leu Phe Val Ala Tyr Met Phe Arg Arg Tyr Asn Ser Val Thr Gly
97          450                     455                     460
98  Ser Ser Ser Ser Ile Thr Ala Val Glu Lys Ala Asn
99  465                     470                     475
101 <210> SEQ ID NO: 3
102 <211> LENGTH: 480
103 <212> TYPE: PRT
104 <213> ORGANISM: Psidium Guajava (guava)
106 <400> SEQUENCE: 3
107 Met Ser Pro Ala Met Ser Ser Thr Tyr Pro Pro Ser Leu Ser Pro Pro
108 1                   5                       10                      15
109 Ser Ser Pro Arg Pro Thr Thr Leu Pro Val Arg Thr Ile Pro Gly Ser
```

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```
110                    20                    25                    30
111    Tyr Gly Trp Pro Leu Leu Gly Pro Ile Ser Asp Arg Leu Asp Tyr Phe
112            35                    40                    45
113    Trp Phe Gln Gly Pro Glu Thr Phe Phe Arg Lys Arg Ile Glu Lys Tyr
114        50                    55                    60
115    Lys Ser Thr Val Phe Arg Ala Asn Val Pro Pro Cys Phe Pro Phe Phe
116    65                    70                    75                    80
117    Ser Asn Val Asn Pro Asn Val Val Val Leu Asp Cys Glu Ser Phe
118                    85                    90                    95
119    Ala His Leu Phe Asp Met Glu Ile Val Glu Lys Ser Asn Val Leu Val
120            100                   105                   110
121    Gly Asp Phe Met Pro Ser Val Lys Tyr Thr Gly Asn Ile Arg Val Cys
122        115                   120                   125
123    Ala Tyr Leu Asp Thr Ser Glu Pro Gln His Ala Gln Val Lys Asn Phe
124        130                   135                   140
125    Ala Met Asp Ile Leu Lys Arg Ser Ser Lys Val Trp Glu Ser Glu Val
126    145                   150                   155                   160
127    Ile Ser Asn Leu Asp Thr Met Trp Asp Thr Ile Glu Ser Ser Leu Ala
128                    165                   170                   175
129    Lys Asp Gly Asn Ala Ser Val Ile Phe Pro Leu Gln Lys Phe Leu Phe
130                    180                   185                   190
131    Asn Phe Leu Ser Lys Ser Ile Ile Gly Ala Asp Pro Ala Ala Ser Pro
132            195                   200                   205
133    Gln Val Ala Lys Ser Gly Tyr Ala Met Leu Asp Arg Trp Leu Ala Leu
134        210                   215                   220
135    Gln Leu Leu Pro Thr Ile Asn Ile Gly Val Leu Gln Pro Leu Val Glu
136    225                   230                   235                   240
137    Ile Phe Leu His Ser Trp Ala Tyr Pro Phe Ala Leu Val Ser Gly Asp
138                    245                   250                   255
139    Tyr Asn Lys Leu Tyr Gln Phe Ile Glu Lys Glu Gly Arg Glu Ala Val
140                    260                   265                   270
141    Glu Arg Ala Lys Ala Glu Phe Gly Leu Thr His Gln Glu Ala Ile His
142            275                   280                   285
143    Asn Leu Leu Phe Ile Leu Gly Phe Asn Ala Phe Gly Gly Phe Ser Ile
144        290                   295                   300
145    Phe Leu Pro Thr Leu Leu Ser Asn Ile Leu Ser Asp Thr Thr Gly Leu
146    305                   310                   315                   320
147    Gln Asp Arg Leu Arg Lys Glu Val Arg Ala Lys Gly Gly Pro Ala Leu
148                    325                   330                   335
149    Ser Phe Ala Ser Val Lys Glu Met Glu Leu Val Lys Ser Val Val Tyr
150            340                   345                   350
151    Glu Thr Leu Arg Leu Asn Pro Pro Val Pro Phe Gln Tyr Ala Arg Ala
152            355                   360                   365
153    Arg Lys Asp Phe Gln Leu Lys Ser His Asp Ser Val Phe Asp Val Lys
154        370                   375                   380
156    Lys Gly Glu Leu Leu Cys Gly Tyr Gln Lys Val Val Met Thr Asp Pro
157    385                   390                   395                   400
158    Lys Val Phe Asp Glu Pro Glu Ser Phe Asn Ser Asp Arg Phe Val Gln
159                    405                   410                   415
```

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```
160   Asn Ser Glu Leu Leu Asp Tyr Leu Tyr Trp Ser Asn Gly Pro Gln Thr
161             420                 425                 430
162   Gly Thr Pro Thr Glu Ser Asn Lys Gln Cys Ala Ala Lys Asp Tyr Val
163             435                 440                 445
164   Thr Leu Thr Ala Cys Leu Phe Val Ala Tyr Met Phe Arg Arg Tyr Asn
165         450                 455                 460
166   Ser Val Thr Gly Ser Ser Ser Ser Ile Thr Ala Val Glu Lys Ala Asn
167   465                 470                 475                 480
169   <210> SEQ ID NO: 4
170   <211> LENGTH: 483
171   <212> TYPE: PRT
172   <213> ORGANISM: Psidium Guajava (guava)
174   <400> SEQUENCE: 4
175   Met Ser Asn Met Ser Pro Ala Met Ser Ser Thr Tyr Pro Pro Ser Leu
176   1                 5                   10                  15
177   Ser Pro Pro Ser Ser Pro Arg Pro Thr Thr Leu Pro Val Arg Thr Ile
178             20                  25                  30
179   Pro Gly Ser Tyr Gly Trp Pro Leu Leu Gly Pro Ile Ser Asp Arg Leu
180             35                  40                  45
181   Asp Tyr Phe Trp Phe Gln Gly Pro Glu Thr Phe Phe Arg Lys Arg Ile
182         50                  55                  60
183   Glu Lys Tyr Lys Ser Thr Val Phe Arg Ala Asn Val Pro Pro Cys Phe
184   65                  70                  75                  80
185   Pro Phe Phe Ser Asn Val Asn Pro Asn Val Val Val Leu Asp Cys
186             85                  90                  95
187   Glu Ser Phe Ala His Leu Phe Asp Met Glu Ile Val Glu Lys Ser Asn
188             100                 105                 110
189   Val Leu Val Gly Asp Phe Met Pro Ser Val Lys Tyr Thr Gly Asn Ile
190             115                 120                 125
191   Arg Val Cys Ala Tyr Leu Asp Thr Ser Glu Pro Gln His Ala Gln Val
192         130                 135                 140
193   Lys Asn Phe Ala Met Asp Ile Leu Lys Arg Ser Ser Lys Val Trp Glu
194   145                 150                 155                 160
195   Ser Glu Val Ile Ser Asn Leu Asp Thr Met Trp Asp Thr Ile Glu Ser
196             165                 170                 175
197   Ser Leu Ala Lys Asp Gly Asn Ala Ser Val Ile Phe Pro Leu Gln Lys
198             180                 185                 190
199   Phe Leu Phe Asn Phe Leu Ser Lys Ser Ile Ile Gly Ala Asp Pro Ala
200             195                 200                 205
201   Ala Ser Pro Gln Val Ala Lys Ser Gly Tyr Ala Met Leu Asp Arg Trp
202         210                 215                 220
203   Leu Ala Leu Gln Leu Leu Pro Thr Ile Asn Ile Gly Val Leu Gln Pro
204   225                 230                 235                 240
205   Leu Val Glu Ile Phe Leu His Ser Trp Ala Tyr Pro Phe Ala Leu Val
206             245                 250                 255
207   Ser Gly Asp Tyr Asn Lys Leu Tyr Gln Phe Ile Glu Lys Glu Gly Arg
208             260                 265                 270
209   Glu Ala Val Glu Arg Ala Lys Ala Glu Phe Gly Leu Thr His Gln Glu
210             275                 280                 285
```

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```
211  Ala Ile His Asn Leu Leu Phe Ile Leu Gly Phe Asn Ala Phe Gly Gly
212      290                 295                 300
213  Phe Ser Ile Phe Leu Pro Thr Leu Leu Ser Asn Ile Leu Ser Asp Thr
214  305                 310                 315                 320
215  Thr Gly Leu Gln Asp Arg Leu Arg Lys Glu Val Arg Ala Lys Gly Gly
216                  325                 330                 335
217  Pro Ala Leu Ser Phe Ala Ser Val Lys Glu Met Glu Leu Val Lys Ser
218                  340                 345                 350
219  Val Val Tyr Glu Thr Leu Arg Leu Asn Pro Pro Val Pro Phe Gln Tyr
220              355                 360                 365
221  Ala Arg Ala Arg Lys Asp Phe Gln Leu Lys Ser His Asp Ser Val Phe
222      370                 375                 380
223  Asp Val Lys Lys Gly Glu Leu Leu Cys Gly Tyr Gln Lys Val Val Met
224  385                 390                 395                 400
225  Thr Asp Pro Lys Val Phe Asp Glu Pro Glu Ser Phe Asn Ser Asp Arg
226                  405                 410                 415
227  Phe Val Gln Asn Ser Glu Leu Leu Asp Tyr Leu Tyr Trp Ser Asn Gly
228                  420                 425                 430
229  Pro Gln Thr Gly Thr Pro Thr Glu Ser Asn Lys Gln Cys Ala Ala Lys
230              435                 440                 445
231  Asp Tyr Val Thr Leu Thr Ala Cys Leu Phe Val Ala Tyr Met Phe Arg
232      450                 455                 460
234  Arg Tyr Asn Ser Val Thr Gly Ser Ser Ser Ser Ile Thr Ala Val Glu
235  465                 470                 475                 480
236  Lys Ala Asn
239  <210> SEQ ID NO: 5
240  <211> LENGTH: 8
241  <212> TYPE: PRT
242  <213> ORGANISM: Psidium Guajava (guava)
244  <400> SEQUENCE: 5
245  Met Ala Arg Val Val Met Ser Asn
246    1                 5
248  <210> SEQ ID NO: 6
249  <211> LENGTH: 488
250  <212> TYPE: PRT
251  <213> ORGANISM: Psidium Guajava (guava)
253  <400> SEQUENCE: 6
254  Met Ala Arg Val Val Met Ser Asn Met Ser Pro Ala Met Ser Ser Thr
255    1                 5                 10                 15
256  Tyr Pro Pro Ser Leu Ser Pro Pro Ser Ser Pro Arg Pro Thr Thr Leu
257              20                 25                 30
258  Pro Val Arg Thr Ile Pro Gly Ser Tyr Gly Trp Pro Leu Leu Gly Pro
259              35                 40                 45
260  Ile Ser Asp Arg Leu Asp Tyr Phe Trp Phe Gln Gly Pro Glu Thr Phe
261      50                 55                 60
262  Phe Arg Lys Arg Ile Glu Lys Tyr Lys Ser Thr Val Phe Arg Ala Asn
263  65                 70                 75                 80
264  Val Pro Pro Cys Phe Pro Phe Phe Ser Asn Val Asn Pro Asn Val Val
265              85                 90                 95
```

VERIFICATION SUMMARY
PATENT APPLICATION: **US/10/042,991**

DATE: 01/30/2002
TIME: 15:33:27

Input Set : **A:\W123650.txt**
Output Set: **N:\CRF3\01302002\J042991.raw**

L:15 M:270 C: Current Application Number differs, Replaced Current Application Number
L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date